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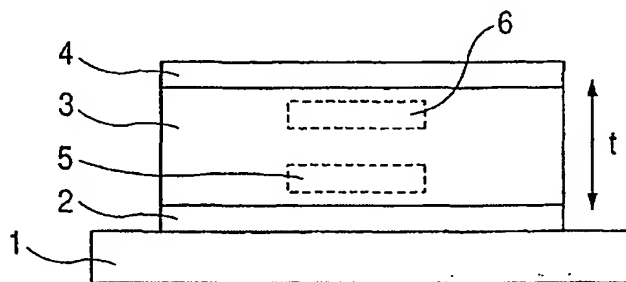
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(54) Title: PIEZOELECTRIC THIN FILM, METHOD OF MANUFACTURING PIEZOELECTRIC THIN FILM, PIEZOELEC-
TRIC ELEMENT, AND INK JET RECORDING HEAD



(57) Abstract: There is disclosed a piezoelectric thin film having less non-uniform portion and holding satisfactory piezoelectric characteristics, a method of manufacturing the film, a piezoelectric element using the piezoelectric thin film, and an ink jet system recording head using the piezoelectric element. In the piezoelectric thin film of perovskite crystals formed on a substrate by a sol-gel process and represented by a general formula $Pb_{(1-x)}La_x(Zr_yTi_{1-y})O_3$ (where $0 \leq x < 1$, $0.05 \leq y \leq 1$), a film thickness of the thin film is 1000 nm or more and 4000 nm or less, and a difference between a maximum value and a minimum value of y in an arbitrary portion of the thin film is 0.05 or less.

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